

Application No.: 10/574,313
Filing Date: December 13, 2006

REMARKS

In response to the Office Action mailed January 25, 2008, the Applicants respectfully request the Examiner to reconsider the above-captioned application in view of the foregoing amendments and the following remarks.

Summary of the Office Action

In the January 25, 2008 Office Action, Claims 1 and 3-15 stand rejected. Claim 11 stands objected to because of minor informalities. Claims 1 and 3-15 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Claims 1 and 3 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,105,690 issued to Lazzara et al. (hereinafter “Lazzara”). Claims 1, 3, 7 and 13-15 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Publication No. 2002/0177105 to Engman (hereinafter “Engman”). Claims 4-6 and 8-11 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Lazzara in view of U.S. Patent No. 5,259,280 issued to Hoy (hereinafter “Hoy”). Claim 12 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Engman.

Summary of the Amendment

Upon entry of this amendment, Applicants will have amended Claims 1, 3-6, 10, 12-14, canceled Claims 2, 8-9, and 11, and added new Claims 16-20. Accordingly, Claims 1, 3-7, 10, and 12-21 currently remain pending. Please note that in the amendments to the claims, deletions are indicated by strikethrough (e.g. ~~deletion~~) or double brackets (e.g. [[word]]) and additions to the claims are underlined (e.g. addition). By this amendment, the Applicants respond to the Examiner’s comments and rejections made in the January 25, 2008 Office Action. Applicants respectfully submit that the present application is in condition for allowance.

Objection due to Minor Informalities

Claim 11 stands objected to by the Examiner due to minor informalities. Claim 11 stands objected to because currently amended it reads “arrangeme stress”. Applicants have canceled

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Claim 11. Accordingly, Applicants respectfully request that the Examiner withdraw his objection of Claim 11.

Rejection under 35 U.S.C. § 112

In the Office Action, Claims 1 and 3-15 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants have amended Claim 1 and respectfully submit that it now complies with Section 112, second paragraph. In particular, Applicants respectfully submit that Claim 1 clearly recites and interrelates the respective components of the claim to dental implant assembly. Further, each of the dependent claims from Claim 1 which required corresponding amendments have also been amended. As such, Applicants respectfully request that the Examiner withdraw his rejection of Claims 1 and 3-15 under Section 112, second paragraph.

Rejection under 35 U.S.C. § 102(b)

In the Office Action, Claims 1 and 3 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Lazzara. While Applicants reserve the right to prosecute these claims as originally filed, Applicants have amended Claim 1 in order to expedite prosecution of this Application. Accordingly, Applicants respectfully request that the rejection of Claim 1, as well as Claim 3 be withdrawn and that these claims be indicated as allowable over the art of record.

Lazzara is directed to a driver for screws and bolts, for example, that includes a tapered bit that can be inserted into a socket of the screw or bolt in order to transmit torque to the screw or bolt. *See Abstract*. The tapered bit of the driver is shorter than the depth of the socket. *See id.* In this manner, as the bit is inserted into the socket, the tapered configuration of the bit causes the bit to contact the socket of the screw or bolt. *See id.* Thus, the tapered bit of the driver can “make a firm frictional engagement with the edge 30 of the socket.” *See id.* at col. 2, lines 42-48. Lazzara also discloses that the width of the bit is sufficiently close to the width of the socket so as to assure that the bit is able to turn the bolt or screw. *See id.* at col. 2, lines 48-55. However, despite the disclosure of a frictional engagement between the driver and the socket of the bolt or screw, the Office Action notes that Lazzara fails to disclose or otherwise teach a

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coating or any other material that can be used with the driver or the socket that enhances the frictional engagement therebetween. *See* Office Action, page 4.

In contrast, Claim 1 recites, *inter alia*, a dental implant “wherein at least one of the first and second lateral surfaces comprises a friction-enhancing coating of one of titanium nitride and chromium carbide.” Accordingly, Applicants believe that Lazzara cannot properly serve as a Section 102(b) reference because Lazzara fails to disclose each and every element recited in Claims 1. Accordingly, Applicants respectfully request that the Examiner withdraw his rejection of Claim 1 based on Lazzara.

In Re Patentability of Claim 1

Applicants note the Office Action has cited Hoy in order to reject several of the dependent claims in the present application. In particular, the Office Action has cited Hoy in order to support the proposition that the prior art teaches a friction enhancing coating on the “first lateral surfaces.” Applicants respectfully submit that a rejection of Claim 1 based on the combination of Lazzara and Hoy is improper because these references fail to teach each and every feature of Claim 1.

Hoy is directed to a tool (such as a screwdriver) that uses a multi-component coating on its working surfaces in order to enhance the transmission of torque against a workpiece (such as a screw). *See* Hoy, Abstract. In particular, the working surfaces of the tool (i.e. screwdriver) are coated with a base layer 7 and an embedment layer 9 into which particles of a metallic or mineral material are applied. *See id.* Hoy specifically discloses that “Nickel is selected for the embedment layer 9.” *See id.* at col 3, lines 48-49 (emphasis added). Further, Hoy discloses that the other component of the coating is an aggregate-type material, such as diamond chips. *See id.*

Hoy teaches that this multi-component coating is formed such that the “embedment layer 9 fills the spaces between the individual particles of friction material located alongside each other over a part of their height. The level of this embedment layer is slightly raised in the region of the particles 8 of friction material, which further improves the anchoring of said particles.” *See id.* at col. 3, lines 44-54.

However, Hoy does not teach a coating that can be used in medical applications. This is due to the fact that nickel is a toxic substance and is not suitable for medical use. Therefore,

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Hoy's express teaching that nickel is used as the embedment layer contradicts the Office Actions assertion that such a combination would be proper in medical applications.

In contrast to the teachings of Lazzara and Hoy, Claim 1 is directed to a dental implant comprising, *inter alia*, "a friction-enhancing coating of one of titanium nitride and chromium carbide." Applicants respectfully submit that Hoy does not teach or otherwise disclose the friction-enhancing coating as recited in Claim 1. Instead, as noted above, Hoy teaches the formation of a matrix of materials consisting of a non-biocompatible, toxic nickel embedment layer. Hoy is completely devoid of any teaching or other disclosure that a friction-enhancing coating can be formed without the use Nickel for the embedment layer. Hoy, col. 3, lines 48-49. Hoy is also completely devoid of any teaching or other disclosure that the multi-component coating can be used in medical applications. Therefore, Applicants respectfully submit that Claim 1 is patentable over Lazzara or Engman in view of Hoy.

Finally, Applicants respectfully submit any combination and interpretation of Lazarra and Hoy to reject Claim 1 as currently presented would be the result of impermissible hindsight reasoning. A factfinder should be aware of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning. *KSR International Co. v. Teleflex Inc.*, 550 U.S. at ____ (82 U.S.P.Q.2d at 1397) (2007). The Examiner's judgment on obviousness should consider only knowledge which was within the level of ordinary skill in the art at the time the claimed invention was made, and should not include knowledge gleaned only from Applicant's disclosure. *In re McLaughlin*, 443 F.2d 1392, 1395 (170 U.S.P.Q. 209, 212) (CCPA 1971). In the face of the apparent teachings of Hoy and Lazarra, and the lack of any reason given in Hoy or Lazarra to use the "friction-enhancing coating of one of titanium nitride or chromium carbide" as recited in Claim 1, an ordinarily skilled artisan would not find it obvious to combine the teachings of Hoy and Lazarra to arrive at the dental implant assembly as claimed in Claim 1.

Therefore, Applicant respectfully requests that the Examiner withdraw the rejection of Claims 1 and 12, as well as those of Claims 2, 3, 5, and 7-13 for at least the reason that these claims depend from allowable base claims.

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Traversal of Rejections under 35 U.S.C. § 102(e)

In the Office Action, Claims 1, 3, 7 and 13-15 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Publication No. 2002/0177105 to Engman. While Applicants reserve the right to prosecute these claims as originally filed, Applicants have amended Claim 1 in order to expedite prosecution of this Application. Accordingly, Applicants respectfully request that the rejection of Claim 1, as well as Claims 3, 7, and 13-15 be withdrawn and that these claims be indicated as allowable over the art of record.

Similar to Lazzara, Engman is directed to “an implant having an implant body, a spacer and internal means for preventing twisting therebetween and/or between an insertion tool.” Engman, ¶ [0021]. However, Engman also specifically discloses that “the present invention is directed to an insertion tool with capacity to carry the implant body or parts of it to the prepared site with no other connective forces than introduced by the friction and press-fit between the tool and the implant body.” *Id.* As noted above with respect to Lazzara, Engman also fails to disclose or otherwise teach the use of any coating or other material on the surface of the implant or the tool in order to enhance the frictional engagement therebetween.

In contrast, Claim 1 recites, *inter alia*, a dental implant “wherein at least one of the first and second lateral surfaces comprises a friction-enhancing coating of one of titanium nitride and chromium carbide.” Accordingly, Applicants believe that Engman cannot properly serve as a Section 102(b) reference because Engman fails to disclose each and every element recited in Claims 1. Accordingly, Applicants respectfully request that the Examiner withdraw his rejection of Claim 1 based on Engman.

Traversal of Rejection under 35 U.S.C. § 103(a)

In the Office Action, Claims 4-6 and 8-11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lazzara in view of Hoy and Claim 12 stands rejected under Section 103(a) as being unpatentable over Engman. Applicants respectfully submit that Claim 1 is allowable over the art of record and that Claims 4-6, 10, and 12 should be allowable for at least the reason that these claims depend from an allowable independent base claim. Accordingly, Applicants respectfully request that the Examiner withdraw his rejection of these claims under Section 103(a).

New Claims 16-20

Applicants hereby submit new Claims 16-20 for consideration. Applicants respectfully submit that Claim 16 is allowable for at least the reason that these claims depend from an allowable independent base claim, Claim 1. Furthermore, Applicants respectfully submit that Claim 17 and Claims 18-20, which depend from Claim 17, are patentable over the art of record. In particular, Claim 17 recites, “A dental implant assembly for counteracting stress in a portion of the dental implant assembly, the assembly comprising: a dental implant comprising a flange and an internal socket, the flange being disposed at an upper part of the dental implant, the internal socket having first, second, and third portions being spaced along a longitudinal axis of the dental implant, the first portion of the socket being disposed at the upper part of the dental implant and defining a first mating section, the second and third portions of the socket defining interacting surfaces; and a turning instrument being configured to engage the internal socket and to turn the dental implant, the turning instrument comprising a drive part and a guide pin part, the drive part having a second mating section that can cooperate with the first mating section of the internal socket for transmitting torque from the turning instrument to the dental implant, the guide pin part comprising first and second longitudinally extending parts, the first and second longitudinally extending parts being configured with the first longitudinally extending part being interposed between the drive part and the second longitudinally extending part such that the first longitudinally extending part corresponds to the interacting surface of the second portion of the socket and the second longitudinally extending part corresponds to the interacting surface of the third portion of the socket, the guide pin part being configured to take up bending moments between the dental implant and the turning instrument for reducing stresses placed on the flange and internal socket of the dental implant; wherein at least one of the first and second mating sections comprises a friction-enhancing coating comprising titanium nitride for enhancing friction between the turning instrument and the internal socket, the friction-enhancing coating facilitating the reduction of stress in the implant portion upon exertion of torque by the turning instrument against the internal socket.” Applicants respectfully request that Claims 16-20 be indicated as allowable over the art of record.

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No Disclaimers or Disavowals

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, the Applicants are not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. The Applicants reserve the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that the Applicants have made any disclaimers or disavowals of any subject matter supported by the present application.

CONCLUSION

Applicants respectfully submit that the above rejections and objections have been overcome and that the present application is now in condition for allowance. Therefore, the Applicants respectfully request that the Examiner indicate that Claims 1, 3-7, 10, and 12-20 are now acceptable and allowed. Accordingly, early issuance of a Notice of Allowance is most earnestly solicited.

Applicants respectfully submit that the claims are in condition for allowance in view of the above remarks. Any remarks in support of patentability of one claim, however, should not be imputed to any other claim, even if similar terminology is used. Additionally, any remarks referring to only a portion of a claim should not be understood to base patentability on that portion; rather, patentability must rest on each claim taken as a whole. Applicants respectfully traverse each of the Examiner's rejections and each of the Examiner's assertions regarding what the prior art shows or teaches, even if not expressly discussed herein. Although amendments have been made, no acquiescence or estoppel is or should be implied thereby. Rather, the amendments are made only to expedite prosecution of the present application, and without prejudice to presentation or assertion, in the future, of claims on the subject matter affected thereby. Applicants also have not presented arguments concerning whether the applied references can be properly combined in view of, among other things, the clearly missing elements

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noted above, and Applicants reserve the right to later contest whether a proper reason exists to combine these references and to submit indicia of the non-obviousness of the claimed implant assembly.

The undersigned has made a good faith effort to respond to all of the rejections in the case and to place the claim and drawings in condition for immediate allowance. Nevertheless, if any undeveloped issues remain or if any issues require clarification, the Examiner is respectfully requested to call the Applicants' attorney in order to resolve such issue promptly.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

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By: N.S.
Nathan S. Smith
Registration No. 53,615
Attorney of Record
Customer No. 20995
(949) 760-0404

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